

Operating Instructions

Digital Video Recorder

Models: DLR3-16N/160CDV,
DLR3-16N/410CDV,
DLR3-16N/660CDV



Safety instructions

EMC class

- ▶ This video recorder (DVR) is a class A device in accordance with EN 55022.
- ▶ This device may cause interference to other equipment in domestic use. In such cases the persons operating the DVR are required to provide appropriate countermeasures, for which they themselves bear the cost.

Importance of these Operating Instructions

- ▶ Please read the safety instructions and the other information contained in the Operating Instructions before connecting up and operating the DVR.
- ▶ The Operating Instructions should be kept in a safe place for later reference.

Ambient conditions for the DVR

- ▶ The DVR should be protected against excessive heat, dust, damp and vibration.
- ▶ The DVR may only be operated at temperatures between +5°C and +40°C, and up to a maximum air humidity of 90%.
- ▶ The DVR may only be operated indoors, and must be protected against incursion of water and damp.

Care of the DVR

- ▶ Never switch on the DVR when damp has penetrated it. In such cases, have the DVR checked by a qualified service engineer.
- ▶ Do not place any heavy objects on the DVR.
- ▶ Never cover over the DVR's vents.
- ▶ Never insert metal objects or any other items into the vents. This may permanently damage the DVR.
- ▶ The housing may only be opened by authorised persons. Repairs may only be carried out by qualified service personnel.
- ▶ The DVR must be disconnected from the power supply before its housing is opened.

Getting started with the DVR

- ▶ When laying the connecting cables, make sure no weight is placed on them, that they are not kinked or damaged, and that no damp can penetrate them.

Cleaning the DVR

- ▶ The housing of the DVR may only be cleaned with a damp (not wet) cloth,
- ▶ Use only a mild detergent. Do not use solvent-containing detergents or petrol. This could permanently damage the surface finish.

Spare parts

- ▶ Use only original spare parts from Videor Technical GmbH.

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Overview

Package contents

- Digital video recorder (DVR)
- Mains power cord
- Operating instructions
- RAS (Remote Administration System) software on CD
- Operating instructions for RAS software on paper and CD
- Mounting kit for cabinet installation

Basic functions

- Record video images using multiple cameras
- Even-based recording start
- Video playback
- Search for specific video sequences

Features

- MPEG-4 compression / duplex mode
- 8 or 16 loop-through inputs / VGA, FBAS outputs
- Audio and alarm inputs / outputs
- Max. recording speed: 100 field images per sec (PAL)
- Memory capacity 160 GB / 410 GB / 660 GB
- Maximum video resolution 720 x 576 pixels
- Archiving/image transfer via USB and CD-RW
- Live picture & Playback Zoom (2x)
- Integral Motion Detector
- Telemetry control functions via RS-485 port
- Network connection (Ethernet)

Requirements for operation

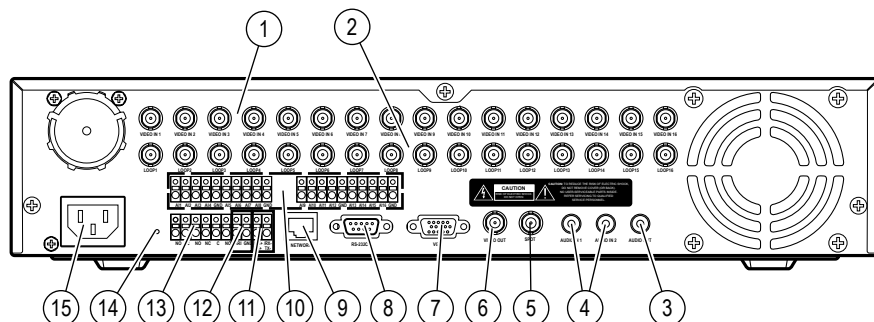
- Digital video recorder DLR3 connected
- At least 1 camera connected
- At least 1 monitor connected
- Mouse connected, if DVR is to be controlled by mouse

Control options

- Front panel
- Mouse
- RAS program

Connections on the rear

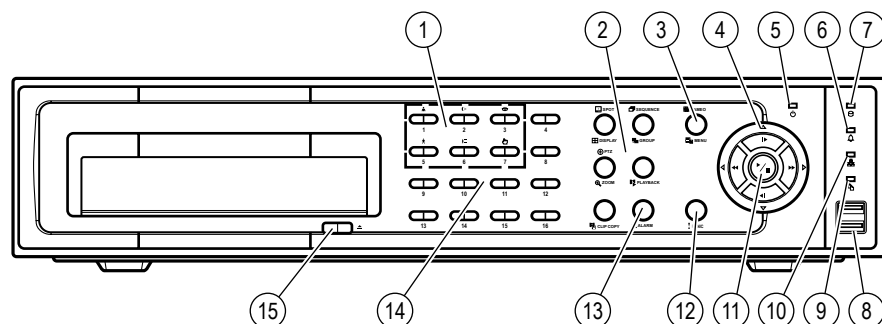
Note: Connections optionally for NTSC or PAL operation.



| No. | Designation | Functions/connections | Example devices |
|-----|---------------------------|-------------------------------------|-----------------------|
| 1 | VIDEO IN 1-16 | Max. 16 video channels | Cameras |
| 2 | LOOP 1-16 | Max. 16 loop-through video channels | Cameras |
| 3 | AUDIO OUT | Audio output | Amplifier, speakers |
| 4 | AUDIO IN 1, AUDIO IN 2 | Max. 2 Audio inputs | Microphone |
| 5 | SPOT | Video output | Spot monitor |
| 6 | VIDEO OUT | Video output | Monitor |
| 7 | VGA | PC monitor | PC monitor |
| 8 | RS-232C | External interface | Modem |
| 9 | NETWORK | Network | Network cable |
| 10 | AI1 - AI16 | Alarm inputs for external devices | Sensors |
| 11 | /RX+, /RX-, TX+, TX- | External interface (RS-485) | Keyboard, PTZ camera |
| 12 | ARI/GND | Reset alarm with external signal | Switch |
| 13 | NO, C, NC | Alarm outputs for external devices | Siren, flashing light |
| 14 | Reset switch | Reset to factory defaults | - |
| 15 | Power supply | Mains power connection | - |

Front panel controls

The following diagram and table set out the controls on the front panel of the DVR:












| No. | Designation | Function |
|-----|---|---|
| 1 | | PTZ camera functions (secondary assignment) |
| 2 | SPOT, SEQUENCE, CAMEO, DISPLAY, GROUP, PTZ, ZOOM, PLAYBACK, CLIP COPY | Function buttons |
| 3 | MENU | Open/quit menu structure (primary assignment) |
| 4 | Menu navigation | Navigate and select within the menu structure (secondary assignment) |
| 5 | | Power-on indicator when DVR is in operation |
| 6 | | Display at alarm |
| 7 | | Indicates hard disk operation |
| 8 | Connections | USB ports |
| 9 | | Indicates recordings being copied |
| 10 | | Indicates Ethernet or modem connection |
| 11 | | Playback functions (primary assignment) |
| 12 | PANIC | Start/end panic recording |
| 13 | ALARM | <ul style="list-style-type: none"> Reset alarm View event list |
| 14 | 1 to 16 | <ul style="list-style-type: none"> Select cameras Enter passwords |
| 15 | | Open built-in CD-RW writer |







Key to controls

Function buttons






Note: The secondary function assignment is accessed by holding down the key.

| Element | Function |
|---|--|
|  | Spot monitor assignments (secondary assignment) |
|  | Sequence On/Off (secondary assignment) |
|  | Cameo mode On/Off (secondary assignment) |
|  | Changing the image display modes (primary usage) |
|  | Switch displayed group (primary assignment) |
|  | PTZ camera functions On/Off (secondary assignment) |
|  | Zoom On/Off (primary assignment) |
|  | Start playback |
|  | Copying recordings |

PTZ camera functions

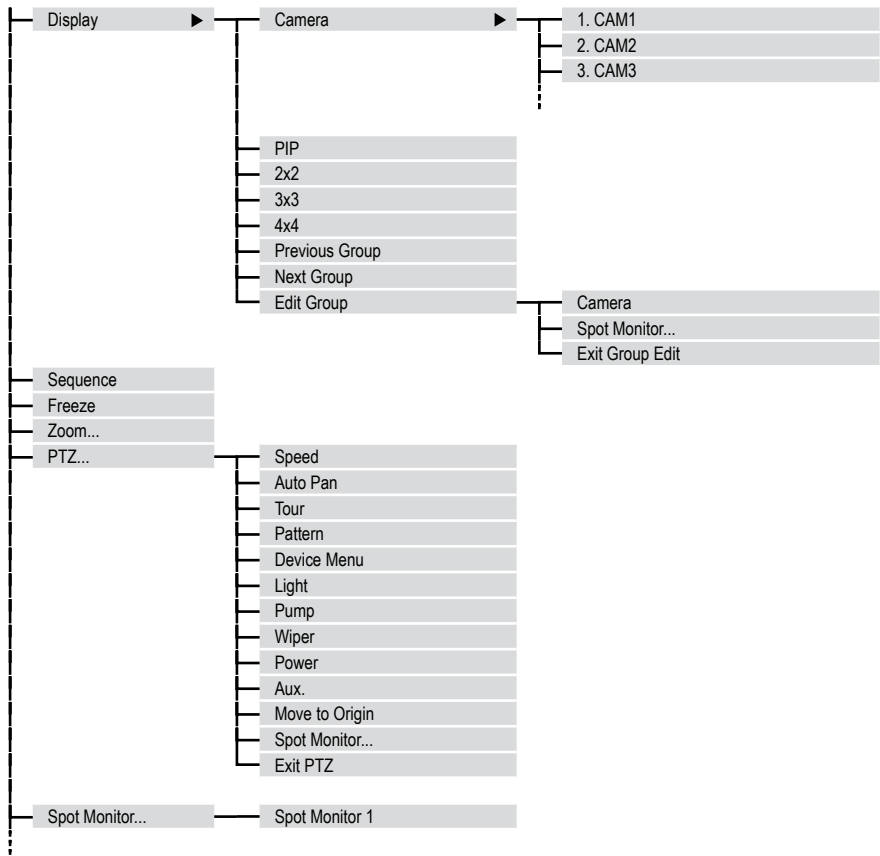
| Element | Function |
|--|-------------|
|  | Zoom in |
|  | Zoom in |
|  | Close-up |
|  | Wide-angle |
|  | Save preset |
|  | Load preset |

Playback functions

| Element | Function |
|---|------------------------|
|  | Frame-by-frame rewind |
|  | Fast rewind |
|  | Start/pause playback |
|  | Fast forward |
|  | Frame-by-frame forward |

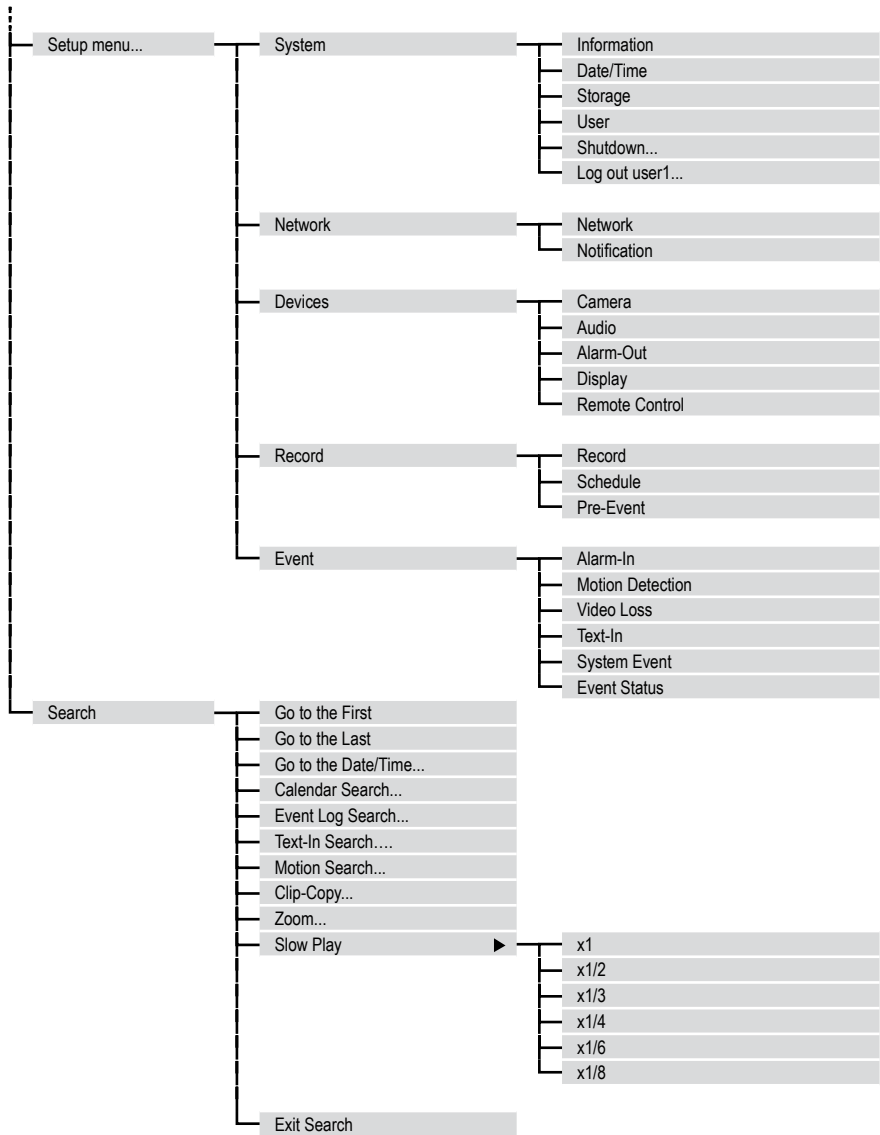
Menu structure

The following diagram shows the menu structure:



Menu structure, continued

The following diagram shows the menu structure:



Getting started

Checklist for DVR operation

| Step | Action | Menu path |
|------|--|--------------------------------------|
| 1 | Connect peripheral devices as per planned setup. | |
| 2 | Specify menu language. | Setup Menu... > System > Information |
| 3 | Adjust date and time. | Setup Menu... > System > Date/Time |
| 4 | Set up user. | Setup Menu... > System > User |
| 5 | Set up network and desired notification channels (optional). | Setup Menu... > Network > ... |
| 6 | Register peripherals with DVR. | Setup Menu... > Devices > ... |
| 7 | Set up event types and associated responses. | Setup Menu... > Event > ... |
| 8 | Set up recording parameters and schedule. | Setup Menu... > Record > ... |

Getting started, continued

Switching on the DVR

Requirement:

- The start-up preparations are complete.

| Step | Action |
|------|--|
| 1 | Plug in DVR mains plug. |
| 2 | Switch on monitor. Result: System starts up automatically and is ready to use. |

Accessing the Setup menu

Requirement:

- The DVR is switched on.
- You have set up a custom user name and password or you are using the following default access data (only when first accessing the Setup menu):
User name: admin
Password: (blank)

| Step | Action | Menu path |
|------|---|---------------|
| 1 | Open Setup Menu... Result: Prompt for user name and password. | Setup Menu... |
| 2 | Log in as user. | |

Switching off the DVR

Requirement:

- You have accessed the Setup menu.

| Step | Action | Menu path |
|------|--|--------------------------------------|
| 1 | Shut down the system. Result: System shuts down automatically. | Setup Menu... > System > Shutdown... |
| 2 | After shutdown, disconnect the mains plug. | |

Administration

Saving your system setup

You can save your DVR's setup data, including its network configuration.

Requirement:

- USB memory stick

| Step | Action | Menu path |
|------|--|--|
| 1 | Insert a USB memory stick into one of the USB ports. | |
| 2 | Export your setup. | Setup menu... > System > Information > Setup Export... |
| 3 | Specify a file name. | |
| 4 | Export your setup. | Export |

Loading your system setup

You can load your stored DVR system setup with or without its network configuration.

Requirement:

- USB memory stick with stored setup

| Step | Action | Menu path |
|------|---|--|
| 1 | Insert a USB memory stick into one of the USB ports. | |
| 2 | Import your setup. | Setup menu... > System > Information > Setup Import... |
| 3 | Select the file name and, where appropriate, the network configuration. | |
| 4 | Import your setup. | Import |

Deleting recordings

You can only delete all your recordings together. It is not possible to delete recordings from a specific time period.

| Step | Action | Menu path |
|------|------------------------|--|
| 1 | Delete all recordings. | Setup Menu... > System > Information > Clear All Data... or Setup menu... > System > Storage > Information tab > Using > Clear |

Administration, continued

Downloading software updates

You can download software updates for your DVR from a USB memory stick.

Requirement:

- USB memory stick with latest software release

| Step | Action | Menu path |
|------|--|---|
| 1 | Insert a USB memory stick into one of the USB ports. | |
| 2 | Start update. | Setup Menu... > System > Information > Upgrade... |
| 3 | Install new release. | |

Hiding from specific users

You can hide video images and camera data according to the preset user rights.

| Step | Action | Menu path |
|------|---|---|
| 1 | Set camera Covert mode. | Setup Menu... > Devices > Camera > Settings |
| 2 | Cancel 'Covert Camera View' access for specific users (groups). | Setup Menu... > System > User |

Restoring factory defaults

Before restoring the factory defaults, you should export your current system settings in case you need to re-import them later. (see *Saving your system setup and Loading your system setup*)

| Step | Action |
|------|---|
| 1 | Shut down the system. |
| 2 | Disconnect the mains plug. |
| 3 | Push a paper clip into the Reset button (on the rear of the DVR) and hold it there. |
| 4 | Plug in the mains plug. |
| 5 | Wait for all the LEDs to flash 5 times (about 30 seconds). |
| 6 | Withdraw the paper clip. |

Administration, continued

Determining the memory requirement of a recording

The amount of memory recorded video sequences will take up depends on the following factors:

- Picture quality
- number of images per second
- duration

The memory requirement for 1 camera is calculated by this formula:

$$\text{Memory requirement} = \text{picture size} \times \text{duration of recording} \times \text{images per second}$$

Calculation example: CIF resolution (PAL):

| Picture quality | Picture size | Duration of recording | Approx. memory space | | |
|-----------------|--------------|-----------------------|----------------------|-------------|-------------|
| | | | 5 images/s | 10 images/s | 25 images/s |
| Low | 2.4 kB | 24 hours | 1.04 GB | 2.07 GB | 5.18 GB |
| Standard | 4.8 kB | 24 hours | 2.07 GB | 4.15 GB | 10.37 GB |
| High | 9.6 kB | 24 hours | 4.15 GB | 8.29 GB | 20.74 GB |
| Very High | 14.4 kB | 24 hours | 6.22 GB | 12.44 GB | 31.10 GB |

2Calculation example: 2CIF resolution (PAL):

| Picture quality | Picture size | Duration of recording | Approx. memory space | | |
|-----------------|--------------|-----------------------|----------------------|-------------|-------------|
| | | | 5 images/s | 10 images/s | 25 images/s |
| Low | 4.8 kB | 24 hours | 2.07 GB | 4.15 GB | 10.37 GB |
| Standard | 9.6 kB | 24 hours | 4.15 GB | 8.29 GB | 20.74 GB |
| High | 19.2 kB | 24 hours | 8.29 GB | 16.59 GB | 41.47 GB |
| Very High | 28.8 kB | 24 hours | 12.44 GB | 24.88 GB | 62.20 GB |

Searching for recordings

Find first stored recording

Search



Go to the First...

Find last stored recording

Search



Go to the Last...

Find recording by date and time

Search



Go to the Date/Time...

Calendar search

For each camera the calendar search indicates:

- the days from which there are recordings
- the time ranges of recordings on those days

Search



Calendar Search...

Event log search

The event log search enables you to search for events based on specific criteria, such as:

- movements recorded by a specific camera
- alarm from a specific alarm input
- System events

Search



Event Log Search...

Text-in search

The text-in search enables you to search for recordings based on specific text inputs.

Search



Text-In Search...

Motion search

The motion search function can detect movements in recordings within defined zones for one camera. 2 types of motion search are possible:

- Motion search: Search for movement in a defined zone.
- Museum search: Search for movement of a defined object.

Search



Motion Search...

Copying recordings

Recordings can be written to a CD or copied to a USB memory stick.

Search

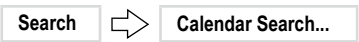





Clip-Copy...

Using calendar search

Performing a calendar search

| Step | Action | Menu path |
|------|---|-----------------------------|
| 1 | Open calendar search. Result: Calendar and time line are displayed. | Search > Calendar Search... |
| 2 | Select day and time | |
| 3 | Confirm input. | Go |



| Term | Symbol | Meaning |
|------------------|---|---|
| |  | Date display ● Grey: No recording available ● White: Recording available |
| |  | Hours display ● White: Recording available |
| Select a Segment |  | If the date and time on the DVR have been changed (such as when switching to Summer time) there may be multiple recordings for one time from the same camera. They are stored in separate segments. |

Using event log search

Performing an event log search

| Step | Action | Menu path |
|------|--|------------------------------|
| 1 | Open event log search. Result: The result of the last search is displayed. | Search > Event Log Search... |
| 2 | Define criteria. | Option... |
| 3 | Confirm input. Result: List of search results is displayed. | Search |
| 4 | Select desired entry from list. | |

Search



Event Log Search...



Option...

| Term | Symbol | Meaning |
|--------------------|---|--|
| From First | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Start date |
| To Last | <input checked="" type="checkbox"/> <input type="text" value="..."/> | End date |
| Check Time Overlap | <input checked="" type="checkbox"/> | Activates a system prompt if there are multiple recordings for the same time range |
| Alarm-In | <input type="text" value="..."/> | Alarm inputs in response to which a search for events is to start |
| Motion | <input type="text" value="..."/> | Cameras on which to search for motion detection |
| Video Loss | <input type="text" value="..."/> | Cameras on which to search for video loss |
| Text-In | <input type="text" value="..."/> | Text input devices on which to search for events |
| Record Channels | <input type="text" value="..."/> | Cameras on which to search for events |
| | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | Search for system events: Setup Menu... > Event > System Event > Actions |

Using text-in search

Performing a text-in search

| Step | Action | Menu path |
|------|--|----------------------------|
| 1 | Open text-in search. Result: The result of the last search is displayed. | Search > Text-In Search... |
| 2 | Define text inputs. | Option... |
| 3 | Confirm input. Result: List of search results is displayed. | Search |
| 4 | Select desired entry from list. | |

Using text-in search, continued

Search



Text-In Search...



Option...

| Term | Symbol | Meaning |
|----------------|--|--|
| From First | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Start date |
| To Last | <input checked="" type="checkbox"/> <input type="text" value="..."/> | End date |
| Channels | <input type="text" value="..."/> | Text input devices on which to search for events |
| | | Type of text input: |
| | <input type="text" value="Any Text-In Product"/> | Any Text-In Product |
| | <input type="text" value="Generic Text"/> | Generic Text |
| | <input type="text" value="Epson"/> | Epson |
| No. | <input checked="" type="checkbox"/> | Numbers of text elements to search for |
| | | Linking operator for different query conditions: |
| - | <input type="text" value="(blank)"/> | (blank) |
| | <input type="text" value="AND"/> | AND |
| | <input type="text" value="OR"/> | OR |
| Name | <input type="text" value="..."/> | Text field by which the search should be made |
| Comp. | <input type="text" value="Comparison conditions"/> | Comparison conditions |
| Value | <input type="text" value="..."/> | Numerical value against which the comparison is to be made |
| Column | <input type="text" value="..."/> | Column number |
| Line | <input type="text" value="..."/> | Line number |
| + | <input type="text" value="Add new set of search parameter"/> | Add new set of search parameter |
| Case Sensitive | <input checked="" type="checkbox"/> | Makes search case-sensitive |
| Load | <input type="checkbox"/> | Load saved search option settings |
| Save | <input type="checkbox"/> | Save current search option settings |

Using motion search

Performing a motion search

| Step | Action | Menu path |
|------|---|---------------------------|
| 1 | Display desired camera in single frame. | Display > Camera > ... |
| 2 | Open motion search. | Search > Motion Search... |
| 3 | Enter settings for motion search. | Option... |
| 4 | Confirm input. Result: List of search results is generated. | Search |
| 5 | Select desired entry from list. | |



| Term | Symbol | Meaning |
|-------------------------------------|--|--|
| From First | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Start date |
| To Last | <input checked="" type="checkbox"/> <input type="text" value="..."/> | End date |
| Type of search: | | |
| Type | <input type="text" value="▼"/> | Motion Search Search for movement in a defined zone |
| | | Museum Search Search for movement of a defined object. |
| Zone | <input type="text" value="..."/> | Definition of motion-sensitive zones for motion search or museum search: <i>See "Zone" on page 44.</i> |
| Sensitivity of motion detection of: | | |
| Sensitivity | <input type="text" value="▼"/> | 1 (Dull) |
| | | 2 |
| | | 3 |
| | | 4 |
| | | 5 (Sensitive) |
| Min. Blocks | <input type="text" value="..."/> | Motion search only (not museum search): Specify in how many motion-sensitive blocks motion must be detected as a minimum to trigger an alarm |

Copying recordings

Copying recordings to CD or USB memory stick

| Step | Action | Menu path |
|------|--|-----------------------|
| 1 | Find desired recordings. Note: Make a note of the data of the recordings you want to copy. | Search > ... |
| 2 | Define settings. | Search > Clip-Copy... |
| 3 | Start copying. Result: The recordings are copied. | Start |

Search



Clip-Copy...

| Term | Symbol | Meaning |
|----------------------|--|--|
| Data Source | <input type="text"/> | Record |
| From First | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Start date |
| To Last | <input checked="" type="checkbox"/> <input type="text" value="..."/> | End date |
| Channels | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Assignment of cameras from which recordings are to be copied |
| Password | <input type="text" value="..."/> | Use password, if desired |
| Dest. | <input type="text" value="▼"/> | Destination medium: |
| | | Internal CD-RW |
| | | USB-CD-RW |
| | | 1. USB Storage |
| | | 2. USB Storage |
| | <input type="text" value="..."/> | 3. USB Storage |
| | | |
| | | |
| File name | <input type="text" value="..."/> | Name of file on destination medium |
| Include Text-In Data | <input checked="" type="checkbox"/> | Activates use of Text-In data |
| Verify After Burning | <input checked="" type="checkbox"/> | Activates verification after burning |
| Progress | <input type="text"/> | Copy status |

Menu descriptions – Setup menu

The Setup menu has the following sub-menus:

System menu



On the "System" menu

- the basic settings are made
- users are administered
- the system is shut down.

Network menu



On the "Network" menu the network settings are made. Network access provides access to all the functions of the DVR via

- RAS (Remote Administration System), independent of Internet Explorer

The DVR can be configured so that alarms trigger a notification by e-mail or notify an RAS.

Devices menu



On the "Devices" menu the connected peripheral devices are configured. Possible peripherals are:

- Cameras
- Microphones and speakers (through amplifier)
- Sirens and signal lamps
- Monitors
- Remote control for PTZ

Record menu



On the "Record" menu the following settings are made:

- Recording quality
- Timer control
- Duration of pre-event recording

Event menu



On the "Event" menu the following settings are made:

- Assignment of alarm inputs to alarms
- Configuration of motion-sensitive zones individually for each camera
- Definition of text input device and assignment to alarms
- Response to undesirable events

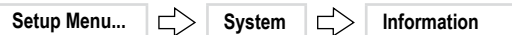
The event status is additionally displayed.

Setup menu

System – Information

On the “Information” menu

- basic information is entered and displayed
- software updates are installed
- recorded data are deleted as required



| Term | Symbol | Meaning |
|--------------------|----------------------------------|--|
| Site | <input type="text" value="..."/> | Location of DVR |
| System ID | <input type="text" value="..."/> | ID for remote keypad <ul style="list-style-type: none">• The remote keypad and DVR must be set to the same ID. |
| Language | <input type="text" value="▼"/> | Menu language |
| Version | <input type="text"/> | Version of DVR software |
| Upgrade... | <input type="checkbox"/> | Starts installing latest version of software via USB port |
| Import... | <input type="checkbox"/> | Import setup |
| Export... | <input type="checkbox"/> | Export setup |
| Show System Log... | <input type="checkbox"/> | Show log of all actions and events |
| From | <input type="text"/> | Date of oldest recording |
| To | <input type="text"/> | Date of newest recording |
| Clear All Data... | <input type="checkbox"/> | Deletes all stored data |

Setup menu, continued

System – Date/Time

On the “Date/Time” menu

- time and date settings are made
- dates of public holidays are entered
- time synchronisation is configured.



| Term | Symbol | Meaning |
|--------------------------|-------------------------------------|--|
| Date | <input type="text" value="..."/> | Date |
| Format | <input type="text" value="v"/> | Date display format |
| Time | <input type="text" value="..."/> | Time |
| Format | <input type="text" value="v"/> | Time display format |
| Time Zone | <input type="text" value="v"/> | Local time zone |
| Use Daylight Saving Time | <input checked="" type="checkbox"/> | Activates use of summertime Daylight Saving Time |



| Term | Symbol | Meaning |
|------|----------------------------------|-------------------------------------|
| No. | <input type="text"/> | Number of entered public holiday |
| Date | <input type="text" value="..."/> | Date of each desired public holiday |








| Term | Symbol | Meaning |
|-----------------|-------------------------------------|---|
| Automatic Sync. | <input checked="" type="checkbox"/> | Activates synchronisation with time server |
| Time Server | <input type="text"/> | IP address or domain name of time server |
| Interval | <input type="text" value="v"/> | Synchronisation interval |
| Last Sync-Time | <input type="text"/> | Time of last synchronisation |
| Run as Server | <input checked="" type="checkbox"/> | Activates use of the DVR as the time server |


Setup menu, continued




System – Storage


On the “Storage” menu the status and usage of the available storage media is displayed.




Setup Menu... ➞ System ➞ Storage ➞  Information

| Term | Symbol | Meaning |
|-------------|---|--------------------------------|
| Type |  | Type of storage medium |
| Capacity |  | Size of storage medium |
| Format |  | Storage medium usage >> |
| Information |  | Time range of recorded data >> |

➞  Format

| Term | Symbol | Meaning |
|-----------|---|--|
| Use as |  | Use of storage medium: |
| | | Record |
| | | Not using |
| Partition |  | Activating permits: |
| | | CD/DVD burn |
| | | Reserves a data buffer as a separate partition. This is essential for burning CDs, and must be activated for a storage medium with „Record“ usage. |
| Format |  | Formatting deletes the recordings from the hard disk |

➞  Information

| Term | Symbol | Meaning |
|-------|---|-----------------------------|
| From |  | Start date of recorded data |
| To |  | End date of recorded data |
| Clear |  | Delete all recordings |

Setup menu, continued

Setup Menu...



System



Storage



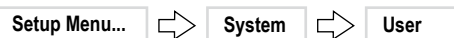
Status

| Term | Symbol | Meaning |
|-------------|----------------------|----------------------------|
| Type | <input type="text"/> | Memory type |
| Disk Bad | <input type="text"/> | Data carrier status |
| Temperature | <input type="text"/> | Temperature status |
| S.M.A.R.T. | <input type="text"/> | Result of S.M.A.R.T. check |

Setup menu, continued

System – User

On the “User” menu the user groups and individual users are set up.



| Term | Symbol | Meaning |
|------------------------------|--------|---|
| Group & User, Group field | | Assignment of group access privileges Table of possible group access privileges >> |
| Group & User, User field | | Set password |
| + Group... | | Add a new group |
| + User... | | Add a new user Set password |
| Auto Login | | User to be logged in automatically |
| Auto Logout | | Time after which logged-in user is automatically logged out |

Table of possible group access privileges

| Group access privilege | Meaning |
|------------------------|---|
| Shutdown | May shut down the DVR |
| Upgrade | May install a new firmware version |
| System Time Change | May change the time setting |
| Data Clear | May delete recording data |
| Setup | May make changes anywhere on the Setup menu |
| Colour Control | May change the picture settings |
| PTZ Control | May control PTZ cameras |
| Alarm-Out Control | May reset alarms |
| Covert Camera View | May view video images from covert cameras |
| System Check | May interrogate system status |
| Record Setup | May make changes to the Record menu |
| Search | May use Search mode |
| Clip-Copy | May copy video images |

Setup menu, continued

System – Shutdown

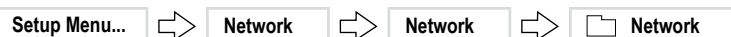


System – Log out USER...



Network – Network

On the “Network” menu all settings required to ensure network access are made.



| Term | Symbol | Meaning |
|----------------|----------------------------------|--|
| Transfer Speed | <input type="text" value="..."/> | Transmission bandwidth: |
| | | (bps) bits per second |
| | | (ips) images per second |
| Quality | <input type="text" value="▼"/> | Quality of picture transmission via network (PAL): |
| | | Very High 14,4 kB/picture |
| | | High 9,6 kB/picture |
| | | Standard 4,8 kB/picture |
| | | Low 2,4 kB/picture |

Setup menu, continued

Setup Menu...






Network



Network



LAN

| Term | Symbol | Meaning |
|----------------------|---|--|
| Type |  | Type of connection to DVR: |
| | | Manual connection required input of: <ul style="list-style-type: none">● IP Address● Gateway● Subnet Mask |
| | | DHCP Automatic assignment of IP address of DNS server |
| | | ADSL (with PPPoE) Requires following input as specified by provider: <ul style="list-style-type: none">● ID● Password |
| | | Note: Use of modem must not be activated. |
| DNS Server |  | Address of DNS server |
| Port Number Setup... |  | Definition of port numbers needed to access the DVR via the RAS software |

Setup Menu...



Network



Network



Modem

| Term | Symbol | Meaning |
|-----------|--------|--|
| Enable | | Enables modem use Note: LAN type ADSL must not be enabled. |
| Baud Rate | | Baud Rate |
| Data Bit | | Number of data bits |
| Stop Bit | | Number of stop bits |
| Parity | | Parity |

Setup menu, continued

Setup Menu...



Network



Network



DVRNS

| Term | Symbol | Meaning |
|----------------------|-------------------------------------|--|
| Use DVR Name Service | <input checked="" type="checkbox"/> | Enables the DVR name service |
| DVRNS Server | <input type="text" value="..."/> | IP address or domain name of DVRNS server DVRNS = Digital Video Recorder Name Service |
| Port | <input type="text" value="..."/> | Port for DVRNS |
| Use NAT | <input checked="" type="checkbox"/> | Enables NAT (Network Address Translation) use |
| DVR Name | <input type="text" value="..."/> | Name by which the DVR is to be registered with the DVRNS server |
| Check | <input type="text" value=""/> | Check DVR name for usability after entering |
| Help Desk | <input type="text" value=""/> | Information from help desk if DVRNS setting correct |

Setup menu, continued

Network – Notification

On the “Notification” menu the method of notification is defined.



| Term | Symbol | Meaning |
|----------------|-------------------------------------|---|
| Enable | <input checked="" type="checkbox"/> | Enables notification by e-mail |
| SMTP Server | <input type="text"/> | IP address or domain name of SMTP server |
| Port | <input type="text" value="..."/> | Port for SMTP server Default is port 25. |
| Authentication | <input type="text" value="..."/> | Login to SMTP server |
| Sender | <input type="text" value="..."/> | E-mail address of sender |
| Recipient | <input type="text" value="..."/> | E-mail address of recipient |



| Term | Symbol | Meaning |
|----------------------------|-------------------------------------|--|
| LAN | <input checked="" type="checkbox"/> | Enables notification of an RAS via LAN |
| No. | <input type="text"/> | Number of IP address |
| IP Address | <input type="text" value="..."/> | IP addresses of RAS PCs |
| Retry | <input type="text" value="..."/> | Number of notification attempts by the DVR in the event of an error |
| Modem | <input checked="" type="checkbox"/> | Enables notification of an RAS via modem |
| Remote Server Phone Number | <input type="text" value="..."/> | Telephone number of the modem on the notified RAS PC |
| Outside Line Call | <input type="text" value="..."/> | Outside line code for external calls, if DVR's modem is connected to a PABX system |
| Callback Phone Number | <input type="text" value="..."/> | Telephone number of DVR's modem The RAS PC contacts the DVR on this number. |

Setup menu, continued

Devices – Camera

On the “Camera” menu the cameras are configured.



| Term | Symbol | Meaning |
|-------|-------------------------------------|--|
| No. | <input checked="" type="checkbox"/> | Activates the cameras |
| Title | <input type="text" value="..."/> | Name of camera |
| Use | <input type="text" value="Normal"/> | Visibility of recordings and camera data depending on user access privileges: |
| | | Normal All users see all camera data and all recordings |
| | | Covert1 Users without relevant access see camera title, status symbol, but no recordings |
| | | Covert2 Users without relevant access see only camera title, but no recordings |



| Term | Symbol | Meaning |
|----------|------------------------------------|---|
| No. | <input type="text"/> | Number of camera |
| Product | <input type="text" value="PTZ"/> | PTZ camera type as per specified list |
| ID | <input type="text" value="..."/> | Unique ID of PTZ camera |
| Port | <input type="text" value="RS485"/> | Interface type of PTZ cameras |
| Setup... | <input type="text" value=""/> | Settings as specified by PTZ camera manufacturer: |
| | | Baud Rate |
| | | Data Bit |
| | | Stop Bit |
| | | Parity |

Setup menu, continued

Devices – Audio

On the “Audio” menu the audio outputs are assigned to the cameras.

Setup menu...



Devices



Audio

| Term | Symbol | Meaning |
|-------------------|-------------------------------------|---------------------------|
| No. | <input type="text"/> | Number of audio output |
| Associated Camera | <input type="text" value="▼"/> | Assignment of camera |
| Enable Audio-Out | <input checked="" type="checkbox"/> | Enables all audio outputs |

Setup menu, continued

Devices – Alarm-Out

On the “Alarm-Out” menu the alarm outputs are configured.

- “Settings” tab: The alarm outputs are configured.
- “Schedule” tab: Time slots are defined in which the alarm outputs respond in specific ways.

Setup Menu... ➞ Devices ➞ Alarm-Out ➞ Settings

| Term | Symbol | Meaning |
|-------|----------------------------------|---|
| No. | <input type="text"/> | Number of alarm output |
| Title | <input type="text" value="..."/> | Name of alarm output |
| Type | <input type="text" value="▼"/> | Contact method of alarm output: NO Normally Open NC Normally Closed |
| Dwell | <input type="text" value="▼"/> | Duration of alarm signal |

Setup Menu... ➞ Devices ➞ Alarm-Out ➞ Schedule

| Term | Symbol | Meaning |
|----------|--|--|
| No. | <input type="text"/> | Number of schedule entry |
| Day | <input type="text" value="▼"/> | Day of the week |
| Range | <input type="text" value="..."/> | Time range at 15-minute intervals |
| Mode | <input type="text" value="▼"/> | Response in defined period: On Continuous alarm Event Alarm in response to event Off No alarm |
| Channels | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Enable <ul style="list-style-type: none">• Alarm outputs• internal beep by DVR |

Setup menu, continued

Devices – Display

On the “Display” menu the mode of on-screen display is configured.



- “OSD” tab: Specify what additional information is displayed on-screen.
- “Main Monitor” tab: Specify how the camera images are displayed on the main monitor.
- “Spot Monitor” tab: Specify which cameras are displayed on the spot monitors.





| Term | Symbol | Displayed symbol | Meaning |
|-------------------|-------------------------------------|------------------|---|
| Progress | | | Activates display of: |
| Zoom | <input checked="" type="checkbox"/> | | Visible when Zoom mode enabled |
| Network | <input checked="" type="checkbox"/> | | Visible when DVR operating in a network |
| Freeze & Sequence | <input checked="" type="checkbox"/> | | <ul style="list-style-type: none"> • Freeze • Visible when Sequence mode enabled |
| Screen Group | <input checked="" type="checkbox"/> | 1/4 | Displays number of groups, and their ID numbers |
| Free Space | <input checked="" type="checkbox"/> | | <ul style="list-style-type: none"> • Visible when Recycle mode enabled • Remaining hard disk capacity, if Recycle mode not selected |
| Date | <input checked="" type="checkbox"/> | - | Date |
| Time | <input checked="" type="checkbox"/> | - | Time |
| User Name | <input checked="" type="checkbox"/> | - | Display of user name |
| Camera | | | Activates display of: |
| No. | <input checked="" type="checkbox"/> | - | Display of camera number |
| Title | <input checked="" type="checkbox"/> | - | Display of camera title |
| Record | <input checked="" type="checkbox"/> | | Display of Record symbols |
| PTZ | <input checked="" type="checkbox"/> | | Visible when PTZ camera is displayed |
| Text-In | <input checked="" type="checkbox"/> | - | Display of character string |
| Display Dwell | <input type="text" value=""/> | - | Text In Dwell Time |
| Transparency | <input type="text" value="..."/> | - | Transparency of menu screens |
| OSD Margin... | <input type="text" value="..."/> | - | Distance of displayed symbols from screen margin |

Setup menu, continued

Setup Menu... ➞ Devices ➞ Display ➞  Main Monitor

| Term | Symbol | Meaning |
|---------------------|---|--|
| Mode |  | Modes of sequences in multiple playback: |
| | | Full Sequence All cameras are switched through sequentially. |
| | | Cameo Only the image at the bottom right is switched through; cameras in „Covert“ mode are not displayed to users without „Covert“ access. |
| Interval |  | Time interval between picture refresh |
| Event Monitoring On | <input checked="" type="checkbox"/> | Displays image of relevant camera in full-screen mode when an event occurs |



Setup Menu... ➞ Devices ➞ Display ➞  Spot Monitor

| Term | Symbol | Meaning |
|----------|---|--|
| No. | <input type="text"/> | Number of spot monitor output |
| Channels |  | <ul style="list-style-type: none"> Cameras Display time of recordings from cameras on spot monitor |

Devices – Remote Control

On the “Remote Control” menu the remote control function is configured.

Setup Menu... ➞ Devices ➞ Remote Control

| Term | Symbol | Meaning |
|------------------------|---|---|
| Port |  | Interface type of remote control |
| Setup... | <input type="checkbox"/> | Setup as specified by manufacturer: |
| | | Baud Rate |
| | | Data Bit |
| | | Stop Bit |
| | | Parity |
| Remote Control Product |  | Remote control type as per specified list |

Setup menu, continued

Record – Record

On the “Record” menu the basic settings for recordings and their quality are made.



| Term | Symbol | Meaning |
|--------------------------|-------------------------------------|--|
| Recycle | <input checked="" type="checkbox"/> | Enables automatic overwriting of the oldest recordings when the hard disk is full Note: If not enabled, recording ends when the hard disk is full. |
| Resolution | <input type="text" value="▼"/> | Quality of recorded images Standard CIF High 2CIF |
| Event Record Dwell | <input type="text" value="▼"/> | Duration of recording when an event occurs |
| Auto Deletion | <input type="text" value="■"/> | Specify time after which automatically deleted |
| Use Panic Recording | <input checked="" type="checkbox"/> | Enables the panic recording function |
| Panic Recording Duration | <input type="text" value="▼"/> | Duration of panic recording No Limit End panic recording by pressing PANIC button xx min. Panic recording ends after preset time or by pressing PANIC button |
| ips | <input type="text" value="▼"/> | Number of recorded images per second in panic recording |
| Quality | <input type="text" value="▼"/> | Picture quality of the recorded images in panic recording |

Setup menu, continued

Record – Schedule

On the "Schedule" menu the schedule for recording is defined.



| Term | Symbol | Meaning |
|-------------|--|---|
| Schedule On | <input checked="" type="checkbox"/> | Enables schedule entries Note: A recording is made only if schedule entries are enabled. Otherwise only panic recording is possible. |
| No. | <input type="text"/> | Number of schedule entry |
| Day | <input type="text" value="▼"/> | Day of the week |
| Range | <input type="text" value="▼"/> | Time range at 15-minute intervals |
| Mode | <input type="text" value="▼"/> | Response: |
| | | No Record - |
| | | Time Always record in the defined time slot in the quality set for "Time" mode |
| | | Event Record only in case of event in the defined time slot in the quality set for „Event“ mode |
| Channels | <input checked="" type="checkbox"/> <input type="text" value="..."/> | Always record in the defined time slot in the quality set for "Time" mode, also in case of event in the defined time slot in the quality set for "Event" mode |
| | | Time & Event mode |
| Settings | <input type="text" value="..."/> <input type="text" value="▼"/> | Assignment of cameras to schedule |
| | | Picture data settings in Time and Event modes: |
| | | ips Number of recorded images per second |
| Default | <input type="text" value=""/> | Quality Picture quality of recorded images |
| | | Picture data defaults in Time and Event modes: |
| | | ips Number of recorded images per second |
| | | Quality Picture quality of recorded images |

Setup menu, continued

Record – Pre-Event

On the “Pre-Event” menu the settings for recording prior to the event are made.



| Term | Symbol | Meaning |
|---------|-------------------------------------|--|
| No. | <input checked="" type="checkbox"/> | Activates the cameras |
| ips | <input type="text" value=""/> | Number of recorded images per second prior to the event |
| Quality | <input type="text" value=""/> | Picture quality of the recorded images prior to the event |
| | | Recording time prior to the event |
| Dwell | <input type="text" value=""/> | Note: The pre-event recording memory capacity is limited. Consequently, the maximum recording time prior to the event, the number of recorded images and picture quality are inter-dependent. |

Setup menu, continued

Event – Alarm-In

On the “Alarm-In” menu the alarm inputs and responses to events are configured.



| Term | Symbol | Meaning |
|--------------|-------------------------------------|--------------------------------|
| No. | <input checked="" type="checkbox"/> | Enables the alarm inputs |
| Title | <input type="text" value="..."/> | Name of alarm input |
| | | Contact method of alarm input: |
| Type | <input type="text" value="▼"/> | NO Normally Open |
| | | NC Normally Closed |
| Panic Record | <input type="text" value="▼"/> | Panic recording of alarm input |



| Term | Symbol | Meaning |
|-----------|--|---|
| No. | <input type="text"/> | Number of alarm input |
| Record | <input type="text" value="..."/> | Assignment of cameras to record in event of alarm These cameras must be in “Event” or “Time and Event” mode within the time slot: Setup Menu... > Record > Schedule |
| Alarm-Out | <input type="text" value="..."/> <input checked="" type="checkbox"/> | Assign and enable <ul style="list-style-type: none"> alarm outputs internal beep by DVR These alarm outputs and the internal beep must be enabled within the time slot: Setup Menu... > Devices > Alarm-Out > Schedule |
| Notify | <input type="text" value="..."/> <input checked="" type="checkbox"/> | Assign and enable notifications: <ul style="list-style-type: none"> Mail Modem LAN 1 to LAN 5 Alert Window The selected function must be enabled: Setup Menu... > Network > Notification |

Setup menu, continued

Setup Menu...



Event



Alarm-In



Actions 2

| Term | Symbol | Meaning |
|--------------|--|--|
| No. | <input type="text"/> | Number of alarm input |
| PTZ | <input type="text" value="..."/> <input type="text" value="▼"/> | Select PTZ cameras to record in event of alarm and select the desired settings |
| Spot Monitor | <input type="text" value="..."/> <input type="text" value="▼"/> | Select spot monitor on which camera image is displayed in event of alarm |

Setup menu, continued

Event – Motion Detection

On the “Motion Detection” menu the motion-sensitive zones are defined and responses to events configured.



| Term | Symbol | Meaning |
|--------------------------|-------------------------------------|---|
| No. | <input checked="" type="checkbox"/> | Enables motion detection for the camera |
| | | Sensitivity of motion detection: |
| Sensitivity | <input type="text" value="..."/> | Daytime |
| | | Nighttime |
| | | Select the motion-sensitive blocks within the time slot |
| | | Left mouse button functions: |
| | | <ul style="list-style-type: none"> Click to select/deselect Click - hold down - drag to define a zone for selection/deletion/back |
| | | Right mouse button functions or menu in time slot to select blocks: |
| Zone | <input type="text" value="..."/> | Select Select complete row of blocks |
| | | Clear Clear selection of a row |
| | | Reverse Reverse selection of a row |
| | | Select All Select all blocks |
| | | Clear All Clear selection of all blocks |
| | | Reverse All Reverse selection of all blocks |
| | | Specify in how many motion-sensitive blocks motion must be detected as a minimum to trigger an alarm: |
| Min. Blocks | <input type="text" value="..."/> | Daytime |
| | | Nighttime |
| Zone View | <input checked="" type="checkbox"/> | Mark the motion-sensitive zones (red in event of motion) |
| Motion Ignoring Interval | <input type="text" value="..."/> | Time interval between 2 events logged as separate events: |
| | | Never Each motion detection is logged as a separate event. |
| Daytime Setup... | <input type="text" value="..."/> | Definition of “Daytime” time range |

Setup menu, continued

Setup Menu...



Event



Motion Detection



Actions 1

| Term | Symbol | Meaning |
|-----------|--|--|
| No. | <input type="text"/> | Number of alarm input |
| Record | <input type="text" value="..."/> | <p>Assignment of cameras to record in event of alarm</p> <p>These cameras must be in "Event" or "Time and Event" mode within the time slot:</p> <p>Setup Menu... > Record > Schedule</p> |
| Alarm-Out | <input type="text" value="..."/> <input checked="" type="checkbox"/> | <p>Assign and enable</p> <ul style="list-style-type: none"> • alarm outputs • internal beep by DVR <p>These alarm outputs and the internal beep must be enabled within the time slot:</p> <p>Setup Menu... > Devices > Alarm-Out > Schedule</p> |
| Notify | <input type="text" value="..."/> <input checked="" type="checkbox"/> | <p>Assign and enable notifications:</p> <p>Mail</p> <p>Modem</p> <p>LAN 1 to LAN 5</p> <p>Alert Window</p> <p>The selected function must be enabled:</p> <p>Setup Menu... > Network > Notification</p> |

Setup Menu...



Event



Motion Detection



Actions 2

| Term | Symbol | Meaning |
|--------------|--|--|
| No. | <input type="text"/> | Number of alarm input |
| PTZ | <input type="text" value="..."/> <input type="text" value="▼"/> | Select PTZ cameras to record in event of alarm and select the desired settings |
| Spot Monitor | <input type="text" value="..."/> <input type="text" value="▼"/> | Select spot monitor on which camera image is displayed in event of alarm |

Setup menu, continued

Event – Video Loss

On the “Video Loss” menu checking for covert cameras and the responses to events are configured.



| Term | Symbol | Meaning |
|-------------------|--------|--|
| Check Obscuration | | Sensitivity of check as to whether camera is covert: |
| | | Never not checked |
| | | 15 very sensitive |



| Term | Symbol | Meaning |
|-----------|--|---|
| No. | <input type="text"/> | Number of covert camera |
| Record | <input type="text" value="..."/> <input checked="" type="checkbox"/> | Assignment of cameras to record in event of alarm |
| | | These cameras must be in “Event” or “Time and Event” mode within the time slot: Setup Menu... > Record > Schedule |
| Alarm-Out | <input type="text" value="..."/> <input checked="" type="checkbox"/> | Assign and enable |
| | | <ul style="list-style-type: none">• alarm outputs• internal beep by DVR |
| | | These alarm outputs and the internal beep must be enabled within the time slot: Setup Menu... > Devices > Alarm-Out > Schedule |
| Notify | <input type="text" value="..."/> <input checked="" type="checkbox"/> | Assign and enable notifications |
| | | Mail |
| | | Modem |
| | | LAN 1 to LAN 5 |
| | | Alert Window |
| | | The selected function must be enabled: Setup Menu... > Network > Notification |

Setup menu, continued

Setup Menu...



Event



Video Loss



Actions 2

| Term | Symbol | Meaning |
|--------------|--|--|
| No. | <input type="text"/> | Number of covert camera |
| PTZ | <div><input type="text" value="..."/> <input type="text" value="▼"/></div> | Select PTZ cameras to record in event of alarm and select the desired settings |
| Spot Monitor | <div><input type="text" value="..."/> <input type="text" value="▼"/></div> | Select spot monitor on which camera image is displayed in event of alarm |

Setup menu, continued

Event – Text-In

On the “Text-In” menu the text input device is defined and the responses to text input are configured.



| Term | Symbol | Meaning |
|-------|----------------------------------|--------------------------------|
| No. | <input type="text"/> | Number of text input device |
| Setup | <input type="text"/> | Configuration of text input >> |
| Title | <input type="text" value="..."/> | Name of text input |

Setup menu, continued



☐ Setup

| Term | Symbol | Meaning |
|-------------------|-------------------------------------|--|
| Port | <input type="text" value="v"/> | Interface |
| Setup... | <input type="text" value="v"/> | Setting as specified by manufacturer of text input device (ATM, cash-till etc.): |
| | | Baud Rate |
| | | Data Bit |
| | | Stop Bit |
| Text-In Product | <input type="text" value="v"/> | Parity |
| | | Type of text input: |
| | | Generic Text |
| Transaction Start | <input type="text" value="..."/> | Epson |
| Any Character | <input checked="" type="checkbox"/> | Character string with which text input must start for the DVR to respond |
| Transaction End | <input type="text" value="..."/> | DVR responds to any character |
| 0 more line(s) | <input type="text" value="v"/> | Character string with which text input must end for the DVR to respond |
| Line Delimiter | <input type="text" value="..."/> | Enables recording of n more lines |
| Ignore String | <input type="text" value="..."/> | Line delimiter as specified by the text input device manufacturer: ^J for LF or ^M for CR |
| Case Sensitive | <input checked="" type="checkbox"/> | Character string in the text input which the DVR is to ignore |
| Time Out | <input type="text" value="v"/> | All transmittable character strings are specified by the text input device manufacturer. |
| | | Case sensitivity according to text input device manufacturer's specification |
| | | Waiting time after the last string |

Setup menu, continued

Setup Menu... ➞ Event ➞ Text-In ➞ Actions 1

| Term | Symbol | Meaning |
|-----------|--|--|
| No. | <input type="text"/> | Number of alarm input |
| Record | <input type="text" value="..."/> | <p>Assignment of cameras to record in event of alarm</p> <p>These cameras must be in "Event" or "Time and Event" mode within the time slot:</p> <p>Setup Menu... > Record > Schedule</p> |
| Alarm-Out | <input type="text" value="..."/> <input checked="" type="checkbox"/> | <p>Assign and enable</p> <ul style="list-style-type: none"> • alarm outputs • internal beep by DVR <p>These alarm outputs and the internal beep must be enabled within the time slot:</p> <p>Setup Menu... > Devices > Alarm-Out > Schedule</p> |
| Notify | <input type="text" value="..."/> <input checked="" type="checkbox"/> | <p>Assign and enable notifications:</p> <p>Mail</p> <p>Modem</p> <p>LAN 1 to LAN 5</p> <p>Alert Window</p> <p>The selected function must be enabled:</p> <p>Setup Menu... > Network > Notification</p> |

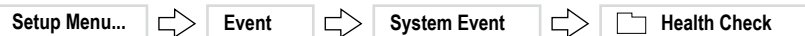
Setup Menu... ➞ Event ➞ Text-In ➞ Actions 2





| Term | Symbol | Meaning |
|--------------|--|--|
| No. | <input type="text"/> | Number of alarm input |
| PTZ | <input type="text" value="..."/> <input type="text" value="▼"/> | Select PTZ cameras to record in event of alarm and select the desired settings |
| Spot Monitor | <input type="text" value="..."/> <input type="text" value="▼"/> | Select spot monitor on which camera image is displayed in event of alarm |

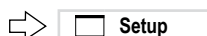
Setup menu, continued






Event – System Event

On the “System Event” menu the self-diagnostics and corresponding messages are configured..






| Term | Symbol | Meaning |
|-----------------|--|---|
| System |  | System self-diagnostics interval |
| Check Recording |  | Setup... . Configuration of schedule >> |
| Check Alarm-In |   | Interval and status for checking alarm inputs |



| Term | Symbol | Meaning |
|-------------|---|-----------------------------------|
| Schedule On |  | Enables schedule entries |
| No. |  | Number of schedule entry |
| Day |  | Day of the week |
| Range |  | Time range at 15-minute intervals |
| Interval |  | Checking interval |



| Term | Symbol | Meaning |
|-------------------------|---|---|
| Disk Bad Notify |  | Percentage of bad sectors on hard disk as from which an alarm is triggered |
| Disk Almost Full Notify |  | Percentage hard disk space available as from which “Disk Almost Full” alarm is triggered |
| Setup... |  | Configuration of data media S.M.A.R.T. check Opens a window in which the frequency rate and time and a temperature limit (in Celsius or Fahrenheit) for the S.M.A.R.T. check can be specified. If the temperature limit is exceeded an alarm is triggered. For details of your hard disk’s temperature limit refer to the manufacturer’s manual. |

Setup menu, continued

Setup Menu...








Event



System Event



Actions

| Term | Symbol | Meaning | |
|--|---|--|--|
| Event |  | Events (based on checks): | |
| | | System | System check failed |
| | | Panic Record | Panic recording in progress |
| | | Check Recording | Recording check failed |
| | | Check Alarm-In | Check of alarm inputs failed |
| | | Disk Almost Full | Preset limit value for hard disk capacity reached |
| | | Disk Full | Hard disk full |
| | | Disk Bad | Preset limit value for number of bad sectors reached |
| | | Disk Temperature | Preset temperature limit reached |
| | | Disk S.M.A.R.T. | S.M.A.R.T. check failed |
| Alarm-Out |   | Assign and enable <ul style="list-style-type: none">● alarm outputs● internal beep by DVR Note: Not possible for system event and panic recording | |
| Notify |   | Assign and enable notifications: | |
| | | Mail | |
| | | Modem | (not in case of system event) |
| | | LAN 1 to LAN 5 | (not in case of system event) |
| | | Alert Window | (not in case of system event) |
| The selected function must be enabled: Setup Menu... > Network > Notification | | | |

Setup menu, continued

Event – Event Status

The “Event Status” menu indicates the status of all possible events:

- Grey text: Event detection not enabled
- White text: Event detection enabled
- Flashing border: Message – acute event for 5 sec
- Yellow field: Pending event



| Term | Event |
|------------------|--|
| Alarm-In | At alarm input 1 to 16 |
| Check Alarm-In | Error detected at one of alarm inputs 1 to 16 |
| Motion | Motion detected on camera 1 to 16 |
| Video Loss | Video loss on camera 1 to 16 |
| Text-In | Text input on text input device 1 to 16 |
| Panic Record | Panic recording |
| Check Recording | On checking the recording |
| Disk Almost Full | On checking the data medium (only if DVR is not operating in Overwrite mode) |
| Disk Full | On checking the data medium (only if DVR is not operating in Overwrite mode) |



| Term | Meaning |
|-------------|----------------------------|
| Type | Memory type |
| Disk Bad | Data carrier status |
| Temperature | Data carrier status |
| S.M.A.R.T. | Result of S.M.A.R.T. check |

Specifications DLR3-16N/XX

| Model | DLR3-16N/160CDV | DLR3-16N/410CDV | DLR3-16N/660CDV |
|---------------------------------------|--|-----------------|-----------------|
| EDP No. | 71926 | 71927 | 71928 |
| Video standard | PAL/NTSC (auto detection) | | |
| Remark | - | | |
| Event logs | Unlimited number of entries for alarm/event/text messages, loss of signal | | |
| Security against unauthorised use | Key locking, 64 user groups with programmable access (up to 256 users) | | |
| Transmission rate | 100 images per sec (PAL) | | |
| Alarm triggering | E-mail, pager, remote SW (RAS) | | |
| Alarm activation | Automatic multi-screen display of alarm images programmable | | |
| Remote Control | - | | |
| Text display interface | ATM/POS, 10 channels max. | | |
| Monitor display | Real-time playback: 25 field images per sec (PAL), 30 field images per sec (NTSC) per camera | | |
| Covert camera mode | Programmable | | |
| Time synchronisation | Network time log, network time server | | |
| System change log | Up to 5000 entries for login/logout, configuration changes, remote access, change of signal connection, disk read/write errors | | |
| Zoom function | 2x | | |
| Playback | Frame image, 4-/9-/16-channel split, PIP | | |
| Post-alarm recording | Up to 15 minutes | | |
| VGA | - | | |
| Control interface | RS-485 port for PTZ control (verified logs: eneo-Fastrax, Pelco P/D) or keyboard connection for remote control | | |
| Activity detection | Programmable 16 x 12 (192) grid, 5 sensitivity settings | | |
| Simplex/Duplex/Triplex/Pentaplex mode | Duplex | | |
| Video inputs | 16x 1 Vp-p, (F)BAS, 75 Ohm, BNC, loop-through | | |
| Monitor outputs | 1x Spot-Outputs 1Vss, (F)BAS, 75 Ohm, BNC | | |
| Video output | 1x 1 Vp-p, (F)BAS, 75 Ohm, BNC; 1x S-VHS, S= 1 Vp-p, C= 0.3 Vp-p, 75 Ohm | | |
| Audio input | 2x amplifier input, cinch | | |
| Audio output | 1x amplifier output, cinch | | |
| Resolution | 720 x 576 pixels (display) | | |
| Compression method | MPEG-4, higher compression rates with same picture quality enable maximum recording times | | |
| Recording speed | 100 field image per sec at CIF resolution (336 x 272 pixels/PAL), 50 field image per sec at 2CIF resolution (672 x 272 pixels/PAL) | | |

Specifications DLR3-16N/XX, continued

| Model | DLR3-16N/160CDV | DLR3-16N/410CDV | DLR3-16N/660CDV |
|------------------------|---|--|-----------------------|
| Picture size | Basic: 2/2.4 kB; Standard: 4/4.8 kB; High: 8/9.6 kB; Very high: 12/14.4 kB (NTSC/PAL). 2 times larger in High Resolution mode | | |
| Hard disk capacity | 160 GB ATA hard disk, expandable to as many as 3 internal hard disks | 410 GB ATA hard disk, expandable to as many as 3 internal hard disks | 660 GB ATA hard disks |
| Playback speed | 25 half-screen images per sec at CIF resolution (336 x 272 pixels/PAL) and Duplex | | |
| Export of picture data | via USB 2.0, CD writer. Network data export: Clip Player, AVI, JPG, BMP | | |
| Alarm inputs | 16x TTL, programmable as NC/NO (terminal strip) | | |
| Alarm outputs | 2x relay output (terminal strip) | | |
| Alarm reset | 1x TTL (terminal strip) | | |
| Alarm messages | System error, hard disk error | | |
| Pre-alarm recording | Up to 30 minutes | | |
| Recording medium | ATA-2 (EIDE) hard disks, built-in CD-RW writer | | |
| Archiving | - | | |
| Menu languages | German, English, Italian, French, Spanish, Polish, Russian, Czech, Hungarian | | |
| Ethernet port | 10Base-T, 100Base-TX, RJ-45 | | |
| Remote software | For remote administration and image search function (RAS plus included) | | |
| Ports | 2x USB, 1x RS-485, 1x RS-232 (remote control/configuration or modem) | | |
| Power Supply | 100 VAC~230VAC, 50/60Hz | | |
| Power consumption | approx. 150 W | | |
| Temperature range | 5°C to 40°C | | |
| Housing | Metal with plastic front panel | | |
| Colour | Pantone 427C | | |
| Dimensions (H x W x D) | 88 x 430 x 393 mm | | |
| Weight | approx. 7.4 kg | | |

Accessories

| EDP No. | Short description |
|---------|---|
| 71857 | 250GB hard disk for DLR/DXR/DTR and DCR |
| 71919 | 500GB hard disk for DLR/DXR/DTR and DCR |
| 74088 | System keyboard with 3-axis joystick |
| 74092 | System keyboard with joystick, 5" monitor |
| 71902 | USB mouse for DVR series DXR, DLR3 |

Supported PTZ cameras

| Manufacturer | Designation |
|------------------|------------------------|
| Costar | CDC 2500 |
| Dyna Color | CDC2400 |
| Chilsung | CRD-J6416 |
| Fine | CRR-1660s |
| Pelco | D-log |
| Dennard | Dennard2060 |
| Tokina | DMP-1223 |
| Dongyang Unitech | DRX-500 |
| Dongyang | DY-255RXC |
| Sensormatic | Delta Dome II/Ultra IV |
| Eneo | Fastrax |
| Philips | G3 Basic AutoDome |
| LG Honeywell) | GRU604A |
| JVC | TK-S576 |
| Sensormatic | Ultra VI |
| Canon | VC-C4 |
| Canon | VC-C50i |
| Inter-M | VRX-2201 |
| Vicon | Vicon |
| Hitron | 22x AF Zoom |
| 360Vision | VisionDome |
| Panasonic | WJ-SX550A |
| Panasonic | WV-CS850/854 |
| CBC | ZC-SD622J |
| Samsung | Zoom Camera |
| Honeywell | HDC-655 |
| LG Honeywell | HSD-25X |
| Honeywell | HSDN-251 |
| Idis | IRX-100 |
| Ultrak | KD6 |
| Ultrak | KD6 Z-series |
| Kalatel | KTD-312 |
| LG | LPT-A100L |
| | Novus-C |
| Samsung | MRX-1000 |

| Manufacturer | Designation |
|-----------------|---------------------|
| Ademco Video | Orbiter Microsphere |
| SysMania | ORX_1000 |
| Linlin | PIH-717 |
| ELMO | PTC-200C/CVAS |
| ELMO | PTC-250C |
| Pacom | Pacom 2036 |
| Dongyang | Power Controller |
| Sungjin | Receiver/MPU |
| Costar | SIC722V |
| Samsung Techwin | SPD 1600 |
| Samsung | Samsung Dome |
| Pelco | Spectra Dome |
| Samsung Techwin | SRX-100B |
| Hitron | Speed Dome |

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Notes on disposal

Correct disposal of this DVR



WEEE (Waste Electrical & Electronic Equipment)

Applicable in the member states of the European Union and other European countries with a separate collection system

The marking on the DVR and on the documentation stipulates that it must not be thrown away in normal domestic waste at the end of its useful life.



General rules

- ▶ Avoid uncontrolled waste disposal: Please dispose of this DVR separately from other waste, so as to avoid posing a hazard to the environment and to human health.
- ▶ Recycle the DVR in order to aid the sustainable reuse of material resources.

Private users

- ▶ Contact the retailer from whom you purchased the DVR or your competent local authority to find out how you can recycle the DVR in an environmentally friendly way.

Commercial users

- ▶ This DVR must not be thrown away with trade waste. To clarify the conditions of disposal, check your purchase contract or contact your supplier.



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